SIEMENS

# Image Quality

AX

## Installation Instructions

Monitoring Temperature of SIRECON Unit and OPTILUX Tube

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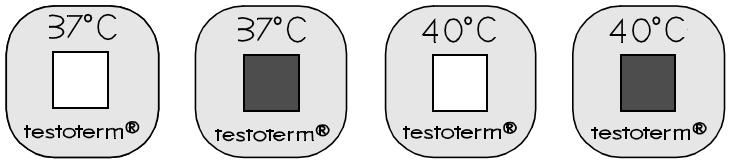
## General Remarks

The SIRECON housing and OPTILUX X-ray tubes are each equipped with temperature indicators for 37°C and 40°C.
These indicate whether the image intensifier was exposed to excessive temperatures while being shipped from the factory to the customer.

The following pages contain information on the serial numbers of the different image intensifier models which are equipped with temperature indicators. The locations of the temperature indicators are also shown.

### Indicators:

Blue stickers imprinted with a temperature threshold. The basic color of the inner square is white (temperatures have not exceeded threshold).
If temperatures exceed the printed threshold, the inner square will turn black.




The temperature indicators are located on the SIRECON housing near the identification plates.
These indicators should be checked before beginning the installation.
If one or both indicators on the image intensifier housing show an excess temperature by a color change, then in any event read off the 37°C indicator on the OPTILUX tube.
The access routes are described on the following pages.

**NOTICE**

**With the SIREMOBIL Compact, SIREMOBIL ISO-C, POWERMOBIL and ARCOSKOP:**
**The I.I. modes used in these systems have both a 37°C and a 40°C temperature indicator only on the outside, near the identification plates.**

**For procedure, see Page 2-1**

**If the temperature indicator on the image intensifier tube also shows that the temperature of 37°C was exceeded, replace the OPTILUX tube.**

**Exception:** Completely replace the SIRECON 40-4 HD and SIRECON 17-2 HDR-L (LITHOSTAR 2).

If no color change has occurred, remove the indicators from the SIRECON housing before handing the system over to the customer.

**NOTICE**

**When a SIRECON unit or an OPTILUX tube is returned to the factory, a completed image intensifier tube questionnaire must be included.**

**Image Quality:**

An image quality acceptance test is required if the SIRECON unit or the OPTILUX tube is replaced. If the SIRECON unit or the OPTILUX tube is replaced, perform a complete image quality test and produce a new measurement certificate.

## SIREMOBIL Compact, SIREMOBIL Iso-C, POWERMOBIL and ARCOSKOP

### SIRECON 17-2 HDR-C (31 35 063 G5256) beginning with Serial No.: 01001

### SIRECON 23-2 HDR-C (31 35 071 G5253) beginning with Serial No.: 01001

### SIRECON 27-2 HDR-C (38 31 703 G5146) beginning with Serial No.: 01001

The I.I. models used in these systems have temperature indicators for 37°C and 40°C which can only be read on the outside, near the identification plates.
Read the two temperature indicators and evaluate them as described below.

**Neither the 37°C nor the 40°C temperature indicator has responded:**

Remove both temperature indicators from the I.I. housing and begin with the startup.

**37°C temperature indicator has responded, but not the 40°C temperature indicator:**

Carry out the complete IQ Quick Test for the system and compare the IQ data obtained with the values specified at the factory. When doing so, pay particular attention to the indirect dose control (IQ Quick Test, Chapter "Checking the ADC Curves"), capillary test, resolution, minimum contrast and image disturbances (artifacts). If there are no differences, remove the two temperature indicators and continue with the startup.

If there are differences to the values specified at the factory (± of the tolerances listed), before replacing the I.I. make sure that there is no other error in the system (e.g. incorrect adjustment of the optical focus, electrical focus...).

If there are no longer any differences after the repair, remove the two temperature indicators and continue with the startup. Otherwise, replace the I.I.

**Both the 37°C and the 40°C temperature indicators have responded:**

Replace the I.I. and carry out the necessary adjustments. See the Service Instructions for the particular system.

## SIRECON with Compact Housing (attached)

### SIRECON 23-3 HDR-D (38 29 509 G5370) beginning with Serial No.: 01001

### SIRECON 23-2 HDR-DL (38 31 042 G5370) beginning with Serial No.: 01001

### SIRECON 23-3 HDR-DX (38 31 034 G5370) beginning with Serial No.: 01001

Check the temperature indicators as for the SIRECON17-2 HDR-C, 23-2 HDR-C and 27-2 HDR-C (see above).

## Access to the Indicators on OPTILUX Tubes

### SIRECON 17 D-C (11 23 467 G5345) beginning with Serial Number: 01333

Remove the I.I. cover panels.
The indicators are located next to the identification plate (Fig. 1).

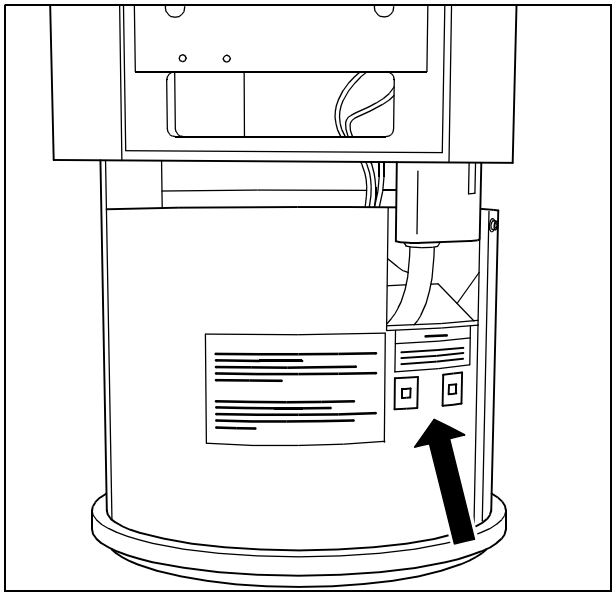


Fig. 1

### SIRECON 23 D-C (11 23 459 G5360) beginning with Serial No.: 01617

Remove the cover panel
The indicators are located next to the identification plate under the mounting on the C-arm. (Fig.2)

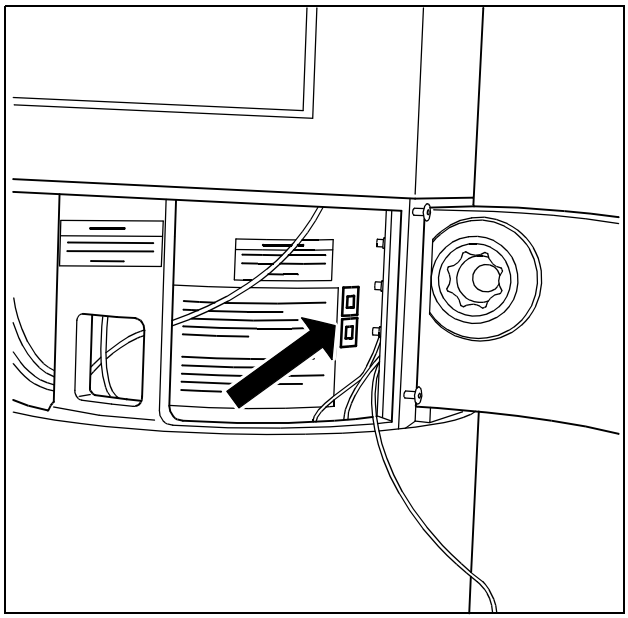


Fig. 2

**SIRECON 17-2 HDR-L (28 31 712 G5256) beginning with Serial No.: 01054**

**SIRECON 17-2 M (31 36 087 G5256) beginning with Serial No.: 01012**

Remove the aluminum cover in front of the image intensifier input. The indicators are located along the outer edge of the input screen. (Fig.3)

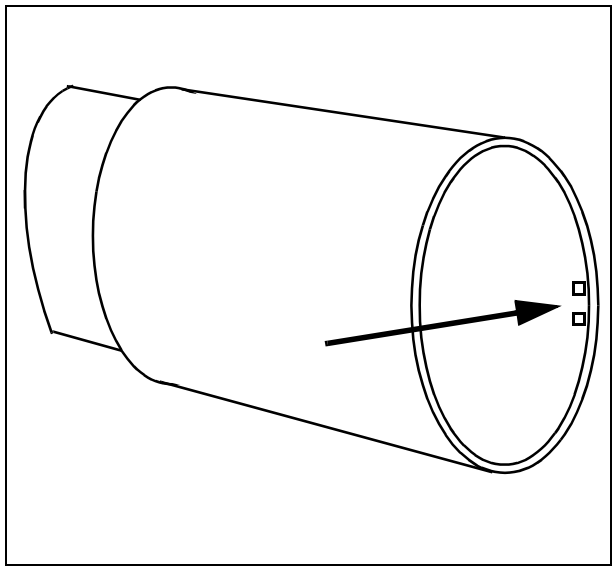


Fig. 3

**SIRECON 23-3 HDR (97 94 504 G5370) beginning with Serial No.: 01857**

**SIRECON 23-3 HDR-X (98 06 506 G5386) beginning with Serial No.: 01501**

**SIRECON 23-3 HDR/CARD (16 15 405 G5375) beg. with Serial No: 01857**

**SIRECON 23_2 HDLE (28 32 769 G5370) beginning with Serial No.: 01311**

**SIRECON 23-3 HDR-XD (38 29 608 G5370) beginning with Serial No.: 01001**

**SIRECON 23-3 M (28 32 983 G5386) beginning with Serial No.: 01023**

Remove the cover from the image intensifier service board.
The indicators can be seen through the slot below the board (Fig.4).

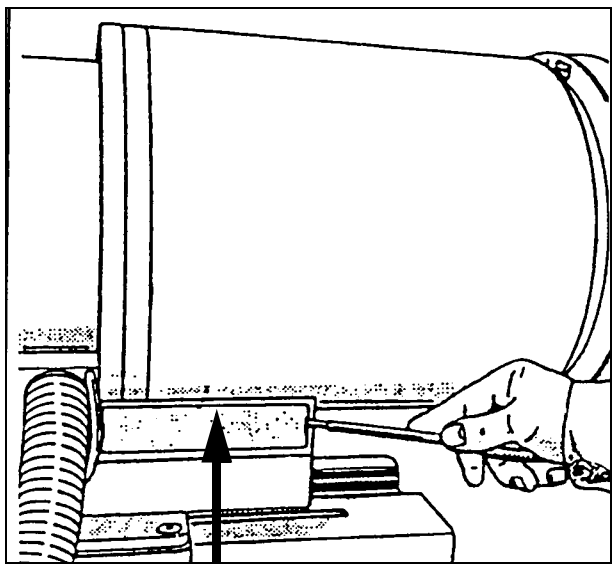


Fig. 4

### SIRECON 27-3 -HDR (31 34 884 G5146) beginning with Serial No.: 01013

The indicators are located behind the curved cover below the light distributor (Fig. 5).

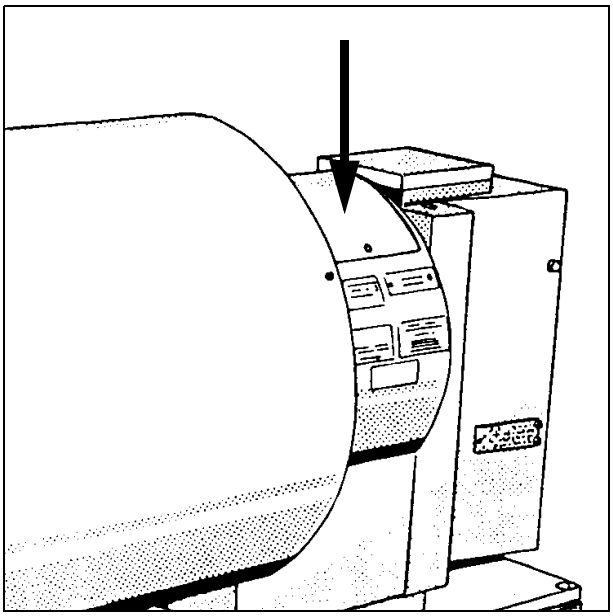


Fig. 5

### SIRECON 33-4/W (31 36 004 G5379) beginning with Serial No.: 01023

### SIRECON 33-4 HDR/W (Angio)(31 35 865 G5379) beginning with Serial No.: 01001

Remove the rectangular cover. The indicators can be seen through the opening on the connector side of the power supply (Fig. 6).

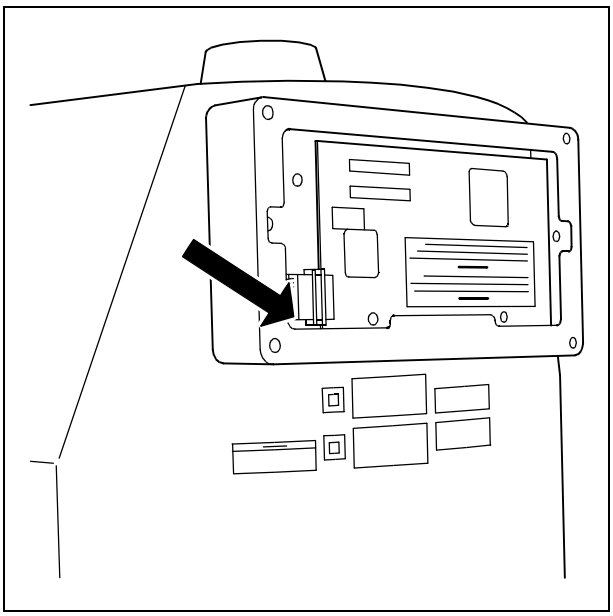


Fig. 6

**SIRECON 33-4 HDR (16 53 653 G5379) beginning with Serial No.: 01532**

**SIRECON 33-4 Angio (31 34 868 G5382) beginning with Serial No.: 01070**

**SIRECON 30-2 TH (31 34 561 G5379) beginning with Serial No.: 01032**

The indicators are located behind the curved cover below the light distributor (Fig. 7).

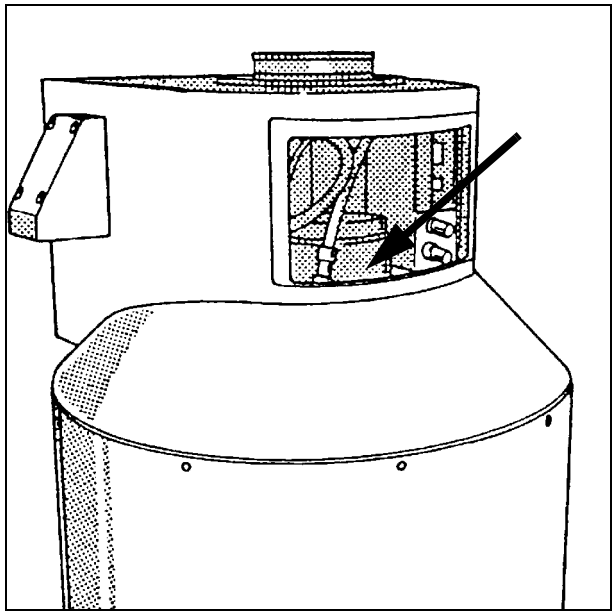


Fig. 7

**SIRECON 40-4 HDR E (28 31 688 G5414) beginning with Serial No.: 01001**

**SIRECON 40-4 HDR IS (31 35 584 G5414) beginning with Serial No.: 01001**

**SIRECON 40-4 HDR (31 35 600 G5414) beginning with Serial No.: 01001**

**SIRECON 40-4 HDR S (28 31 985 G5414) beginning with Serial No.: 01001**

**SIRECON 40-4 HDR S (38 30 564 G5414) beginning with Serial No.: 01001**

**SIRECON 40-4 HD (31 36 012 G5326) beginning with Serial No.: 01102**

**SIRECON 40-4 HD-S (84 43 749 G5328) beginning with Serial No.: 01145**

**SIRECON 40-4 HD-IS (31 36 301 G5326) beginning with Serial No.: 01098**

Remove the cover from the power supply on the image intensifier. The indicators are located below the power supply, near the image intensifier connections (Fig. 8)

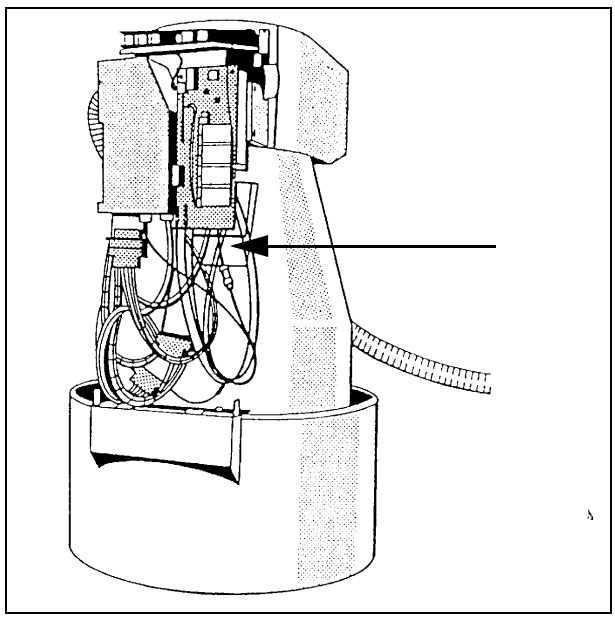


Fig. 8

**Chapter 0**

Page 1 Pub. Number, date and Rev. level updated.

**Chapter 1**

Page 1 1st notice changed.

**Chapter 2**

All pages SIREMOBIL Compact Plus dispensed with, POWERMOBIL and ARCOSKOP included.

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**Chapter 3** Updated.

TD SD 24 / Arnold
TD PS 21 / Bürkel
TD SD 21 / Biedermann